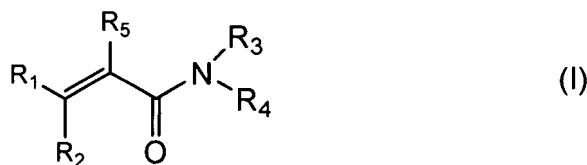


Amendments to the Claims:

1. (Currently amended) Method for the production of α,β -unsaturated amide compounds having the general formula (I):



wherein,

~~R₁ and R₂ are independently hydrogen; optionally linear or branched (C₁-C₁₈) alkyl or (C₁-C₁₈) alkenyl substituted with hydroxy, halogen, phenyl, substituted phenyl, or an ester group [C(O)Oalkyl] or an amide group [C(O)NH₂ or C(O)NHAalkyl]; optionally phenyl substituted with halogen;~~

or

R₁ and R₂ are independently hydrogen, linear or branched (C₁-C₈) alkyl or (C₁-C₈) alkenyl optionally substituted with hydroxy, phenyl or phenyl optionally substituted with halogen or hydroxy,

or,

R₁ or R₂ comprises a group Y-R₆; in which

Y is oxygen (-O-); sulphur (-S-); -NR₇-; or dialkylsiloxy [-alkyl]₂Si-O-];

~~R₆ is hydrogen, optionally linear or branched (C₁-C₁₈) alkyl substituted with hydroxy, halogen, phenyl, substituted phenyl or with an ester group [C(O)OAlkyl] or an amide group [C(O)NH₂] or [C(O)NHAalkyl]; optionally phenyl substituted with halogen;~~

R₆ is hydrogen, linear or branched (C₁-C₈) alkyl or phenyl optionally substituted with hydroxy or halogen;

R₇ is (C₁-C₁₈) alkyl or -N(R₆)(R₇) is a 5- or 6-membered heterocyclic ring;

or

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R₁ together with R₃ is directly bonded or a group having the formula -(CH₂)_n-; in which n is a whole number from 1 to 12;

or

R₁ together with R₂ is cyclohexylidene;

or

R₁ together with R₅ and the incorporated (C=C)-double bond is cyclohexenyl;

or

R₁ together with R₅ and the incorporated (C=C)-double bond forms a group of a monounsaturated bicyclic ring;

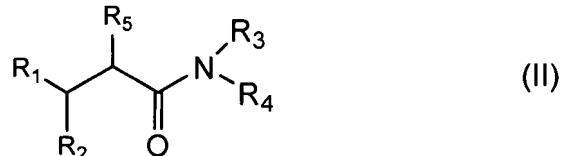
R₃ is hydrogen, optionally a linear or branched (C₁-C₁₂) alkyl, substituted with phenyl, hydroxyl, or halogen, carrying one or more oxygen atoms, (C₅-C₈)-cycloalkyl or (C₅-C₈)-cycloalkenyl, carrying one or more oxygen atoms; preferably, or phenyl substituted with halogen or hydroxyl; or R₃ together with R₁ is directly bond or forms a group of the formula -(CH₂)_n-;

R₄ has one of the meanings of R₃, preferably hydrogen, optionally linear or branched (C₁-C₁₂) alkyl substituted with phenyl, hydroxyl, or halogen, optionally or phenyl substituted with halogen or hydroxyl; or

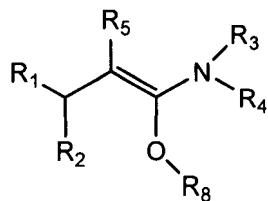
-NR₃R₄ a 5- or 6-membered heterocyclic ring; and

R₅ has one of the meanings specified for R₁ or R₂ as independent substituents, wherein said method comprises the steps of:

(A) reacting a compound of the general formula (II):



wherein R₁, R₂, R₃, R₄ and R₅ have the meanings specified above, to introduce protective groups so as to produce a compound of the general formula (III):



wherein R_8 is trialkylsilyl, or (when R_4 = hydrogen) together with R_9 forms the group $-C(O)-(CH_2)_m-C(O)-$ and
 R_9 (when R_4 = hydrogen) is alkyloxycarbonyl or phenyloxycarbonyl, preferably Boc (= tert. butyloxy-carbonyl); or trialkylsilyl, or together with R_8 the group $-C(O)-(CH_2)_m-C(O)-$, and
 m is 0, 1, 2, or 3, preferably 0 or 1, preferably 0,
and in the case in which for the compound of the general formula (II) hydroxyl is present, it is reacted, with a monovalent protective group R_8 and/or R_9 ;
(B) reacting the compound obtained in step (A) in the presence of (i) a dehydrogenation catalyst selected from compounds of the metals of Group VIII elements, and in the presence of (ii) an oxidizing agent, such as optionally substituted benzoquinone, allyl methyl carbonate, allyl ethyl carbonate and/or allyl propyl carbonate,
to introduce an α,β -double bond in the α,β -position, and
(C) optionally removing, if present, the protective groups R_8 , as well as the substituent R_9 .

2. (Currently amended) Method according to claim 1, wherein R_1 and R_2 are independently hydrogen, ~~optionally linear or branched (C_1-C_8) alkyl or (C_1-C_8) alkenyl substituted with hydroxy, phenyl, phenyl substituted with halogen or hydroxy, or with a (C_{1-4}) alkyl ester group or an amide group or (C_{1-4}) alkyl amide group, preferably, phenyl substituted with halogen; preferably linear or branched (C_1-C_8) alkyl or (C_1-C_8) alkenyl, benzyl or phenyl.~~
3. (Original) Method according to claim 1, wherein R_2 is hydrogen and R_1 is linear or branched (C_1-C_8) alkyl or (C_1-C_8) alkenyl, benzyl or phenyl or $Y-R_6$.

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4. (Original) Method according to claim 1, wherein R₁ is hydrogen and R₂ is linear or branched (C₁-C₈) alkyl or (C₁-C₈) alkenyl; benzyl or phenyl or Y-R₆.
5. (Original) Method according to claim 1, wherein R₁ together with R₃ is directly bonded or forms a group of the formula -(CH₂)_n- and n is a whole number from 1 to 12; or R₁ together with R₂ is cyclohexylidene; or R₁ together with R₅ is cyclohexenyl.
6. (Original) Method according to claim 1, wherein Y in the group Y-R₆ is oxygen.
7. (Currently amended) Method according to claim 1, wherein R₆ is ~~hydrogen, optionally linear or branched (C₁-C₈) alkyl or phenyl substituted with hydroxy, halogen, phenyl, phenyl substituted with halogen, or an (C₁-C₄)alkyl ester group or an amide group or a (C₁-C₄)alkyl amide group; optionally phenyl substituted with halogen; preferably hydrogen, optionally linear or branched (C₁-C₈) alkyl substituted with phenyl, or with a (C₁-C₄) alkyl ester group or an amide group or a (C₁-C₄) alkyl amide group; or phenyl; preferably hydrogen, linear or branched (C₁-C₈) alkyl or phenyl.~~
8. (Original) Method according to claim 1, wherein the substituent -N(R₆)(R₇) as heterocyclic ring is a pyrrolidine or piperidine.
9. (Original) Method according to claim 1, wherein the compound of the formula (II) represents a lactam of an omega amino fatty acid, preferably aminobutyric acid, omega aminovaleric acid, omega aminocapronic acid, or omega aminolauric acid.
10. (Original) Method according to claim 1, wherein the compound of the formula (I), R₁ together with R₅ and the incorporated (C=C)-double bond represent a monounsaturated bicyclic

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ring, preferably a norbornyl group optionally substituted with hydroxyl or amino, preferably a norbornyl group.

11. (Previously presented) Method according to claim 1, wherein R₃ and R₄ are independently hydrogen, linear or branched (C₁-C₄) alkyl optionally substituted with phenyl, phenyl; or the group -NR₃R₄ is pyrrolidine or piperidine.

12. (Original) Method according to claim 1, wherein R₅ is hydrogen, tert. butyl or optionally phenyl substituted with halogen or hydroxyl, preferably hydrogen; and R₈ is trimethylsilyl or R₈ together with R₉ is the group -C(O)-(CH₂)_m-C(O)-; or R₉ is Boc, trimethylsilyl, or R₉ together with R₈ is the group -C(O)-(CH₂)_m-C(O)-, in which m is 0, 1, 2, or 3, preferably 0 or 1, preferably 0.

13. (Original) Method according to claim 1, wherein R₉ is alkyloxycarbonyl, isobutyloxycarbonyl, tert. butyloxycarbonyl, tertiary amyloxycarbonyl, cyclobutyloxycarbonyl, 1-methylcyclobutyloxycarbonyl, cyclopentyloxycarbonyl, cyclohexyloxycarbonyl, 1-methylcyclohexyl, preferably tertiary butyloxycarbonyl.

14. (Currently amended) Method according to claim 1, wherein the dehydrogenation catalyst [in step (B)] is selected from amongst compounds (salts and complexes) of the transition metals of the periodic system, ~~preferably from compounds of the metals of Group VIII elements~~, in particular from iron, ruthenium and osmium; cobalt, rhodium, and iridium; nickel, palladium and platinum; copper, silver and gold preferably from compounds based on rhodium, palladium and platinum.

15. (Original) Method according to claim 14, wherein the dehydrogenation catalyst is a palladium compound, preferably a Pd(0) compound, preferably a tris(dibenzylidene acetone)

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dipalladium chloroform complex or a Pd(II) compound, preferably PdCl_2 , $\text{Pd}(\text{dppe})_2$, $\text{Pd}(\text{dppe})\text{Cl}_2$, $\text{Pd}(\text{OAc})_2$, $\text{Pd}(\text{dppe})(\text{OAc})_2$, π -allyl Pd complex, preferably π -allyl Pd chloride dimer.

16. (Previously presented) Method according to claim 1, wherein an additional complexing agent is used for the thermal stabilisation of the palladium complex, preferably 2,2'-bipyridyl or 1,10-phenanthroline.

17. (Previously presented) Method according to claim 1, wherein the quinone is a substituted quinone, preferably a quinone substituted with C_{1-4} alkyl, halogen, cyano or nitro.

18. (Cancelled)